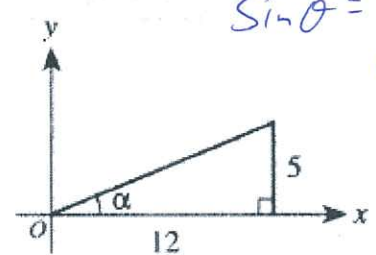
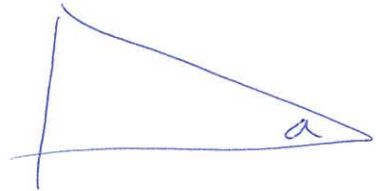


Failure to show work on any problem will result in LaSalle. Only circling an answer choice is NOT acceptable - show me how you are SOLVING these problems! The backside of this paper was left intentionally blank if you need extra space.

<p>1) The point $(3, -4)$ is the midpoint of the line segment in the standard (x, y) coordinate plane joining the point $(8, -11)$ and the point (a, b). Which of the following is (a, b)?</p> <p>A. $(-2, 3)$ B. $(-2, -19)$ C. $(2, -3)$ D. $(2.5, -3.5)$ E. $(5.5, -7.5)$</p> <p>$(8, -11) \quad (3, -4) \quad (a, b)$</p> <p>$\frac{8+a}{2} = \square \quad \frac{-11+b}{2} = \square$</p>	<p>2) What is the sine of α in the right triangle shown in the standard (x, y) coordinate plane below?</p> <p>F. $\frac{5}{13}$ G. $\frac{5}{12}$ H. $\frac{12}{13}$ J. $\frac{12}{5}$ K. $\frac{13}{5}$</p>  <p>$\sin \alpha = \frac{\text{opp}}{\text{hyp}}$</p>
<p>3) Which of the following is NOT a factor of $z^5 - 16z$?</p> <p>A. $z^2 - 1$ B. $z^2 - 4$ C. $z + 2$ D. z E. $z - 2$</p> <p>$z(z^4 - 16)$</p> <p>difference of 2 squares</p>	<p>4) What is the distance, in coordinate units, between $(6, 4)$ and $(8, 10)$ in the standard (x, y) coordinate plane?</p> <p>A. $\sqrt{8}$ B. $\sqrt{32}$ C. $\sqrt{40}$ D. 4 E. 8</p> <p>$\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$</p>
<p>5) Which of the following is an equation of the line that passes through the points $(1, -2)$ and $(4, 7)$ in the standard (x, y) coordinate plane?</p> <p>F. $y = x - 2$ G. $y = 3x - 5$ H. $y = 4x + 7$ J. $y = \frac{5}{3}x + \frac{1}{3}$ K. $y = \frac{1}{3}x + \frac{17}{3}$</p> <p>Slope = $\frac{y_2 - y_1}{x_2 - x_1}$</p> <p>plug $(1, -2)$ and (x, y) into $y = mx + b$</p>	<p>6) An angle in a right triangle has measure α. If $\sin \alpha = \frac{24}{25}$ and $\tan \alpha = \frac{24}{7}$, then $\cos \alpha = ?$</p> <p>F. $\frac{7}{25}$ G. $\frac{7}{24}$ H. $\frac{7}{\sqrt{527}}$ J. $\frac{7}{\sqrt{1,201}}$ K. $\frac{25}{7}$</p> <p>$\cos \alpha = \frac{\text{adj}}{\text{hyp}}$</p> 

EXTRA CREDIT ON THE BACK!



We're bringing ZESTY BACK. YEAH!



In the figure below, A , C , and E are collinear; $\triangle ABC$ and $\triangle ADC$ are as shown; and angle measures are as marked. What is the value of p ?

- A. 110
- B. 58
- C. 55
- D. 46
- E. 23

